AMENDMENTS TO THE CLAIMS

1. **(CURRENTLY AMENDED)** An electrode catheter for defibrillation or mapping or ablation of cardiac tissue, having a terminal at a proximal end of the electrode catheter and one or more sensing or treatment electrodes or both along a distal length on or in proximity to the distal end of the electrode catheter, and having at least one electrical conductor, via which the sensing or treatment electrode is electrically connected to the terminal,

wherein the distal length of the electrode catheter is flexible and steerable, with the electrode catheter being more rigid proximally of the distal length,

wherein the electrical conductor is made of carbon whereby the electrode catheter is constructed as capable of use in the course of magnetic resonance tomography and further wherein the electrical conductor is adapted for connection to an electrophysiology therapy device and has:

a. ~~**at least one defibrillation electrode or**~~

~~**b. at least one sensing electrode for recording and analyzing cardiac tissue potentials or**~~

~~**c.**~~ at least one treatment electrode for delivering high-frequency currents for tissue ablation**, and**

b. a current source connected in communication with the electrical conductor, the current source being configured to deliver high-frequency ablating currents to the electrode.

2. **(ORIGINAL)** The electrode catheter according to claim 1, wherein the electrical conductor is made of carbon fibers.

3. **(ORIGINAL)** The electrode catheter according to claim 2, wherein the electrical conductor is enclosed by an insulating sleeve made of a flexible plastic which is compatible with magnetic resonance.

4. **(ORIGINAL)** The electrode catheter according to claim 3, wherein the insulating sleeve contains an x-ray contrast agent.

5. **(ORIGINAL)** The electrode catheter according to claim 4, wherein the x-ray contrast agent contains barium sulfate or metal particles.

6. **(ORIGINAL)** The electrode catheter according to claim 3, wherein the insulating sleeve is largely made of silicone.

7. **(ORIGINAL)** The electrode catheter according to claim 2, wherein the electrical conductor has a cross-section between 0.5 mm and 1.5 mm and a length between 40 and 120 cm.

8. **(ORIGINAL)** The electrode catheter according to claim 2, wherein the fibers have a diameter between 5 μm and 7 μm.

9-14. **(CANCELED)**

15. **(CURRENTLY AMENDED)** An electrode catheter for ~~**defibrillation or mapping or**~~ ablation of cardiac tissue, the electrical catheter extending between an at least substantially rigid proximal handle section and a flexible distal insertion section, comprising:

a. an electrical terminal connected to the proximal handle section;

b. two or more spaced external electrodes on the distal insertion section; ~~**and**~~

c. electrically conductive carbon fibers extending between each external electrode and the electrical terminal**; and**

d. a current source connected in communication with the conductive carbon fibers, the current source being configured to deliver ablating current to one or more of the electrodes.

16. **(PREVIOUSLY PRESENTED)** The electrode catheter of claim 15 wherein:

a. a first one of the external electrodes is situated at a distal tip of the flexible distal insertion section, and

b. a second one of the external electrodes is spaced from the distal tip of the flexible distal insertion section.

17. **(ORIGINAL)** The electrode catheter of claim 15 wherein the electrically conductive carbon fibers extending from a first one of the external electrodes collectively have a greater diameter than the collected electrically conductive carbon fibers extending from a second one of the external electrodes.

18. **(PREVIOUSLY PRESENTED)** The electrode catheter of claim 15 further comprising

a. a temperature sensor at the distal insertion section, and

b. at least one sensor lead extending from the temperature sensor to the proximal handle section.

19. **(ORIGINAL)** The electrode catheter of claim 15 wherein:

a. a metallic conductor is in electrical communication with the electrical terminal; and

b. an end of the metallic conductor extends adjacent ends of the electrically conductive carbon fibers extending from a first one of the external electrodes, with a sleeve surrounding and electrically engaging the end of the metallic conductor and the adjacent ends of the electrically conductive carbon fibers.

20. **(ORIGINAL)** The electrode catheter of claim 15 wherein the flexible distal insertion section has an x-ray contrast agent therein, whereby the flexible distal insertion section is visible by x-ray imaging.

21. **(CANCELED)**

22. **(PREVIOUSLY PRESENTED)** The electrode catheter of claim 1 further including:

a. a control member extending proximally from the distal length, and

b. a handle connected to the control member,

wherein manipulation of the handle transmits force along the control member to cause bending of the distal length.

23. **(CURRENTLY AMENDED)** A method for electrotherapy of a heart using an electrode catheter having an electrode at or adjacent to a distal end of the electrode catheter, the electrode having electrical conductors made of carbon extending proximally therefrom, the method including the steps of:

~~**a. delivering electrical signals:**~~

~~**(1) to cardiac tissue via the electrode, and/or**~~

~~**(2) from cardiac tissue via the electrode; and**~~

a. delivering high-frequency electrical currents to the cardiac tissue via the electrode, the electrical currents being of sufficient strength that they erode the cardiac tissue, and

b. simultaneously performing magnetic resonance tomography on the cardiac tissue.

24. **(CANCELED)**

25. **(CURRENTLY AMENDED)** An electrode catheter for use on cardiac tissue, the electrical catheter having a length including:

a. an at least substantially rigid proximal handle section;

b. a flexible distal insertion section having:

(1) two or more spaced electrodes thereon, and

(2) a temperature sensor configured to obtain temperature reading from at least a portion of the distal insertion section;

c. electrically conductive carbon fibers extending from the electrodes toward the handle section;

d. an insulating sleeve extending:

(1) about the ~~**conductor**~~ **conductive carbon fibers**, and

(2) along at least a portion of the length of the catheter,

the insulating member containing an x-ray contrast agent;

e. a control member extending from the distal insertion section toward the handle section, wherein tension on the control member flexes the distal insertion section to change the orientation of at least one of the electrodes thereon**;**

f. a current source connected in communication with the conductive carbon fibers, the current source being configured to deliver ablating current to one or more of the electrodes.

26. **(CANCELED)**

27. **(NEW)** The electrode catheter according to claim 25, wherein one or more of the electrodes has an elongated metallic conductor extending therefrom within the distal insertion section, the conductor being:

a. in electrical communication with, and

b. shorter than,

the conductive carbon fibers.

28. **(NEW)** The electrode catheter according to claim 1, wherein a metallic conductor is interposed in electrical communication between the carbon electrical conductor and the electrode, the metallic conductor having shorter length than the carbon electrical conductor.

29. **(NEW)** The electrode catheter according to claim 15, wherein one or more of the external electrodes has an elongated metallic conductor extending therefrom into connection with the conductive carbon fibers, with the metallic conductor having shorter length than the carbon fibers.